So you're ready to reach a state of data nirvana - all of your systems connected for dataflow, automation, and process optimization bliss.

You have determined that a custom integration is needed and that you will invest the resources and time to complete the project.

So what's next? Well, you need to determine the *how* of it all. Just how, exactly, are you going to build this custom integration of yours?

Of course, you're a HubSpot user, so Operations Hub Pro is a natural fit for the job.

But it's not the only one.

While we are big-time fans of HubSpot Operations Hub for its powerful capabilities and the fact that it sits nicely right inside of your HubSpot instance, it is not always the answer when it comes to custom integrations.

In fact, when we talk about building custom integrations with HubSpot, you generally have three options. Read on as we dive into each of the options, plus pros, cons, considerations, and more!

3 Most Common Options for Custom Integrations:

HubSpot's Operations Hub Pro

Operations Hub Pro enables bidirectional integration between HubSpot and third-party tools via private apps and APIs. Custom coded workflows automate data management, allowing record creation, association, and data formatting. The solution requires knowledge of node.js, Python, and API environments. Considerations include API call limits, subscription costs, and complex integrations capability.

Server-Based Solutions

Server-based solutions offer flexible, cost-effective integration with HubSpot's API through private apps. Programs like Amazon AppFlow replicate custom workflows. Varying API call limits and costs depend on providers and requirements. Server solutions are sustainable, not tied to specific technology, and excel in complex integrations.

IPaaS or No-Code, Low-Code Platforms

Integrations Platforms as a Service (IPaaS) or no-code and low-code tools like Zapier, Workato, and Tray.io offer codeless coding for custom integrations. They simplify automation and integration through point-and-click interfaces, supporting complex data manipulation. Considerations include cost, flexibility, and tool agnosticism. These platforms empower creative problem solvers without coding expertise.
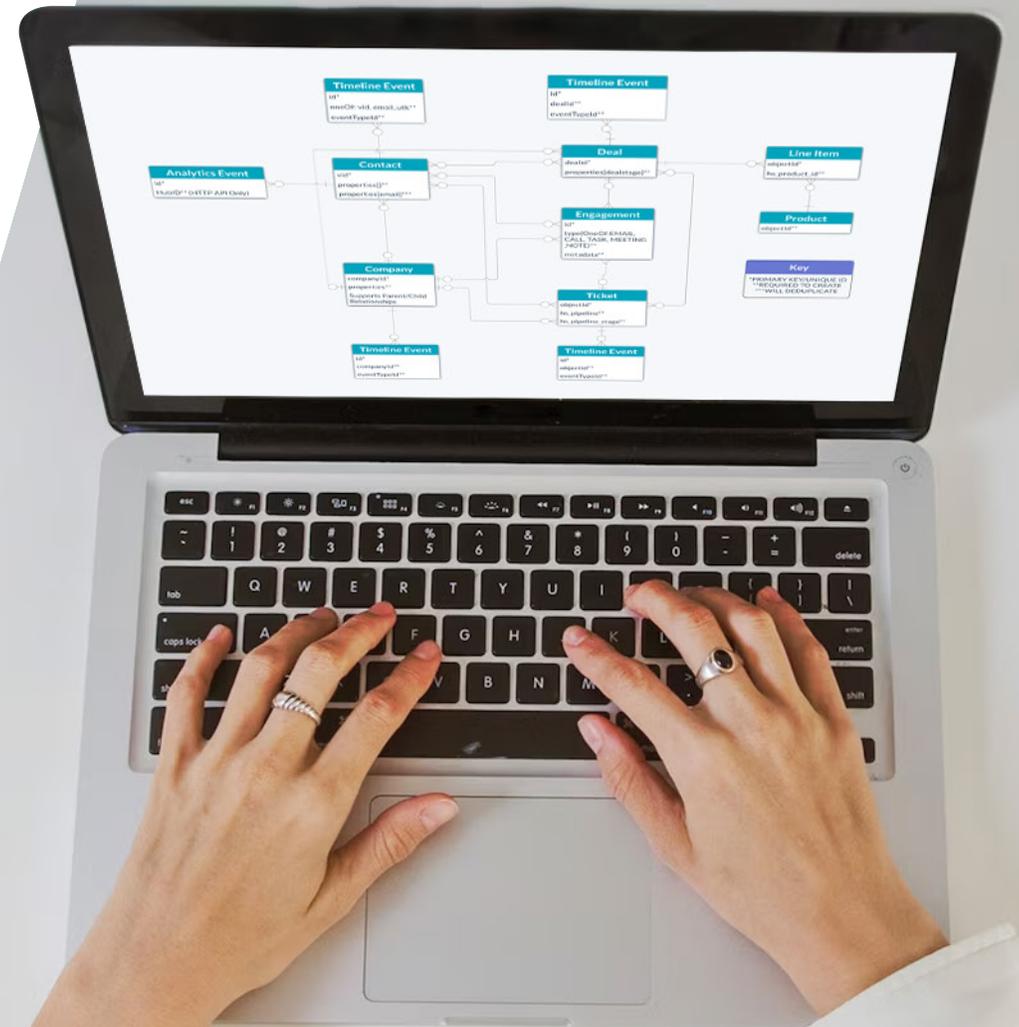
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Considerations When Choosing How To Integrate:

There are many factors that you want to consider before choosing your integration engine. Let's review a list of those factors and how you can relate to each of them.

API Call Limits

The amount of data you are sharing, complexity of how that data is manipulated when shared, number of functions being performed, and frequency of these activities drives the number of API calls made.

The number of API calls drives the cost of your platform.

Some platforms come with a limit on API calls per minute and per day, while others allow you to buy API calls in "bands."

Understanding how many API calls you will be making and its effect on cost should be a serious consideration when you're determining which platform makes the most sense.

If you want to estimate the number of API calls in each of your automations or data syncs, outline the steps of the process, including if/then or conditional branches and data formatting steps. Each of those steps is likely an API call.

Costs

Platform costs differ significantly. You can use Zapier's lowest business package for less than $50/mo. HubSpot's Operations Hub is $800/mo. Workato and Tray.io start at around $7,000/year.

While base platform cost certainly matters, it should not be your only consideration. Remember, it is important to understand your API call load because that can impact platform pricing significantly.

Additionally, you should consider the other features that are offered by the tool that is allowing you to build your custom integration.

For example, HubSpot's Operations Hub Pro offers a lot of other perks such as scheduled workflows, data formatting within workflows, automatic deduplication, a data health dashboard, and more.

Zapier has tables, an email client, and much more.

Sustainability

This consideration touches upon a lot of different areas, but perhaps most important is the ability for your organization to continue to own the solution.

For example, with your API call load level, Zapier may actually be more expensive than another option. But its ease of use and no-code functionality may mean the likelihood of being able to hand the solution over internally for ownership (especially if you don't have a full-time developer on your team) makes it a better option for your organization.

Regardless of the solution you build and the platform you build it on, the fact that you will need to maintain it long-term should be factored into the decision on how to build your custom integration.

Developer Skills

What is your team capable of and familiar with already? What tools do they know?

Will you be building this integration internally or through an agency?

If so, do you have an agency that you are familiar with and like working with? What tools do they know?

Most experienced developers will be able to work within any of the three environments, but more junior developers may not.

Evaluating which tool is going to make you most likely to succeed with the person or people who will be completing your integration should be a consideration in your evaluation.

Now, how much it matters will depend on whether you are completing the project in-house or not. If you are completing it in-house, place a higher priority on your team's tool preferences than you would if you were hiring an agency. An agency can and should adapt to your tech stack and if they can't, they should be able to refer you to someone who can.

Existing Tools

If you already have the Operations Hub, that would make it the front-runner for building your custom integration. The same goes if you are already running code-based functions on your server or have a robust Zapier or Tray.io account.

Don't reinvent the wheel if you already have a tried and true method for building your custom integrations into HubSpot.

All of that being said, this is not the only consideration that should be made, and there may be a good reason to procure a new tool or shift the tool you are using for a specific custom integration.

Capability of Tools

Not all tools are created equal when it comes to integration platforms.

Each of the three options have pros and cons to evaluate.

For example, if the app you want to connect is not already set up on an IPaaS, then the IPaaS may not save you as much time as you think and may cost you more money.

If your integration is super complex and interfaces with other workflows and build components within HubSpot, it may be easier to test and troubleshoot if you keep everything within HubSpot and use the Operations Hub. This is especially true if your custom integration coded workflows are dependent on other workflows and processes within HubSpot.

Explore the capabilities of each option to ensure that they meet your requirements, make managing your solutions straightforward, and are cost effective.

Complexity of the Integration

Integration is a simple word for a complex world of potential solutions. Because an integration is not only about connecting two tools with one another.

The reason we connect tools is because we want to share data or perform functions in specific ways under specific circumstances.

Sometimes the requirements of an integration can be scribbled on the back of a napkin. Other times you will collaborate with multiple stakeholders on six LucidCharts and five pages of requirements.

Complexity can be introduced both within the parameters of a single integration as well as within the overall landscape of integrations that you have and how they all interact with one another.

All of the solutions discussed below can manage complex integrations, but which one is right for you will depend on what makes your integration complex as well as the other considerations mentioned above.

Deep Dive into Your Options:

Operations Hub Pro:

With Operations Hub Pro, you can create a private app to connect HubSpot's API to your 3rd party tool's API. This will allow HubSpot and the application you are integrating to share information, either unidirectional or bidirectional, according to the API permissions of each application.

For example, HubSpot allows you to create or update a contact via its API. If the 3rd party application's API allows that system to push information out, then that information can be passed into HubSpot to create a contact.

It is important to note that you do not need an Operations Hub Pro subscription to create a private app and connect to a 3rd party tool's API. This is available with all HubSpot subscriptions.

The real superpower of the Operations Hub is in its ability to deploy programmable, custom coded workflow automations, schedule workflows, format data within workflows, and more.

Custom coded workflows allow you to lookup, amend, or create records, associate them with other records, assign association labels, and more utilizing the information that is being fed into HubSpot from your 3rd party app's API. It also allows you to send information to the 3rd party's app and perform functions such as associations, object creation, record creation, etc.

HubSpot's Operations Hub does the work on both sides of the handshake.

In order to use this solution, the person implementing and building it needs to be able to work with node.js and/or Python. They also need to be able to work within the API environments of the applications that you are integrating. This is true if you build with HubSpot Operations Hub or use a server-based solution.

Of course, this solution comes with the cost of the Operations Hub Pro subscription and whatever costs you accrue for developing the integration itself.

The average developer rate for building within the Operations Hub is $150-$250/hour. This person will require more hours if they are not familiar with HubSpot and its API.
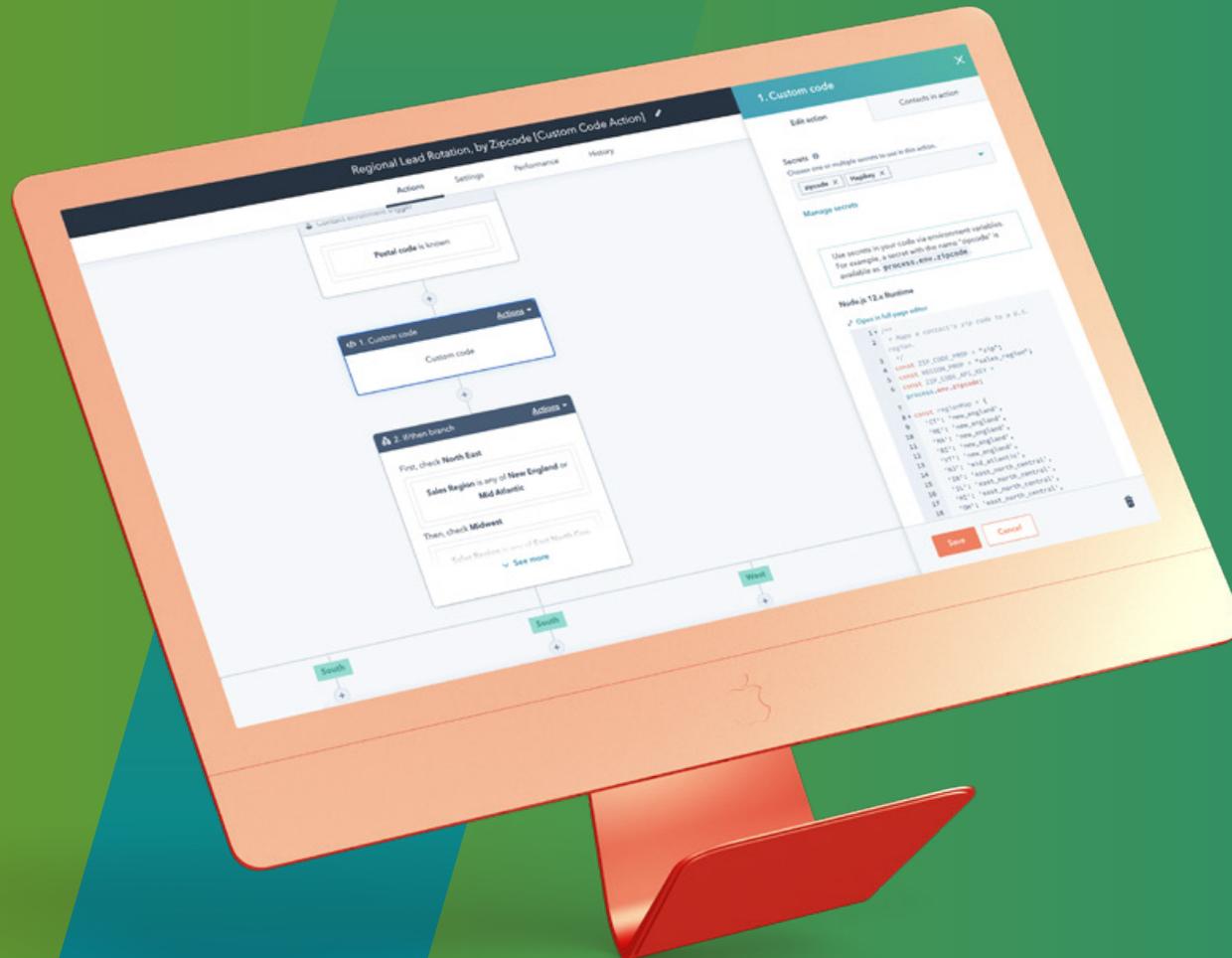
Considerations Breakdown for Operations Hub:

HubSpot Operations Hub has API call limits per minute and per day

- HubSpot's API Limits

  - ✓ 250,000 API calls per day for all Free & Starter products (without the API add-on)

  - ✓ Up to 1,000,000 API calls per day (only with the API add-on)

  - ✓ 200 requests per 10-second API rate limit (only with the API add-on)

  - ✓ Intervals of 5 minutes or more API polling limit

  - ✓ 100 requests per 10-second API rate limit per private app for all free and Starter products

  - ✓ 200 requests per 10-second API rate limit per private app (only with the API add-on)

  - ✓ 500,000 API calls per day for all Professional & Enterprise products (without the API add-on)

  - ✓ 150 requests per 10-second API rate limit for all Professional and Enterprise products (without the API add-on)

  - ✓ 100 requests per 10-second API rate limit for all Free and Starter products

  - ✓ Up to 5% of total syncs failed API requests limit

  - ✓ 150 requests per 10-second API rate limit per private app for all Professional and Enterprise products (without the API add-on)

Additional API calls can be purchased

- API Limit Increase - $500/month

  - ✓ You can increase your included API call volume for your integrations between your HubSpot account and other services to up to 1,000,000 calls per day.

  - ✓ This is available as a limit increase to any edition of Marketing Hub, Sales Hub, Service Hub, CMS Hub, or Operations Hub.

  - ✓ The Operations Hub Pro subscription is $800/mo. If you have discounting applied to your account already for other Hubs, you will likely receive the same discount rate for this additional Hub – but this needs to be discussed with a partner (like us!) or your HubSpot sales rep.

  - ✓ The Operations Hub can be used as a stand alone solution and is sustainable.

  - ✓ HubSpot's overall software interface, API documentation, and developer tools are well-documented and easy-to-use. The ramp time for learning these tools is small for a talented developer.

  - ✓ The Operations Hub can handle any custom integration that has webhooks or API parameters that will allow your requirements to be met.

  - ✓ The Operations Hub can handle very complex integrations, even if all of those integrations are not built into HubSpot. If you have multiple data sources that connect to HubSpot and many operational activities happening within HubSpot, the Operations Hub will provide a streamlined experience and an easier testing environment.

Server-Based Solutions for Custom Integrations

HubSpot's API can be used via private apps without an Operations Hub Pro subscription. HubSpot has extensive API functionality and fantastic documentation about that functionality.

If the application you are integrating with HubSpot has the API functionality you need, you can use programs on your server to perform the same functionality as custom coded workflows do within HubSpot.

These server-based programs, such as AWS Fargate, will define your API calls and what happens to the data that is shared between your applications.

Depending on your overall tech stack, development resources + the systems they are familiar with, and API call load, server-based solutions are sometimes the right call.

While it moves the data formatting engine outside of your central tool, it does offer an option that may be more convenient or cost-effective for some.

Considerations Breakdown for Server-Based Solutions:

- API call limits will be defined by your server package - prices vary across different providers.

- Costs vary greatly, from under $100/mo to thousands of dollars monthly depending on your overall functionality and security requirements. Your server instance is likely being impacted by multiple variables that you will need to do discovery on before determining if this is the right solution.

- A server-based solution is sustainable if your company owns your server and your server is managed by a reliable company. One of the benefits of a server-based solution is that it is not tied to a specific piece of technology, like a CRM or a MAP.

- Developers are most likely to be familiar with this environment for building integrations, but each server environment has variation based on who the provider is and whether it is a cloud-based or physical server.

- Your current hosting environment may not be set up for this if your business does not require it, so this tool may or may not be within your current stack. Note that having a website does not mean that you have a server environment to support this type of solution.

- A server-based integration solution will not have capability limitations outside of those created by the API of the tool that you are seeking to integrate.

- Complex integrations work well with server-based solutions.
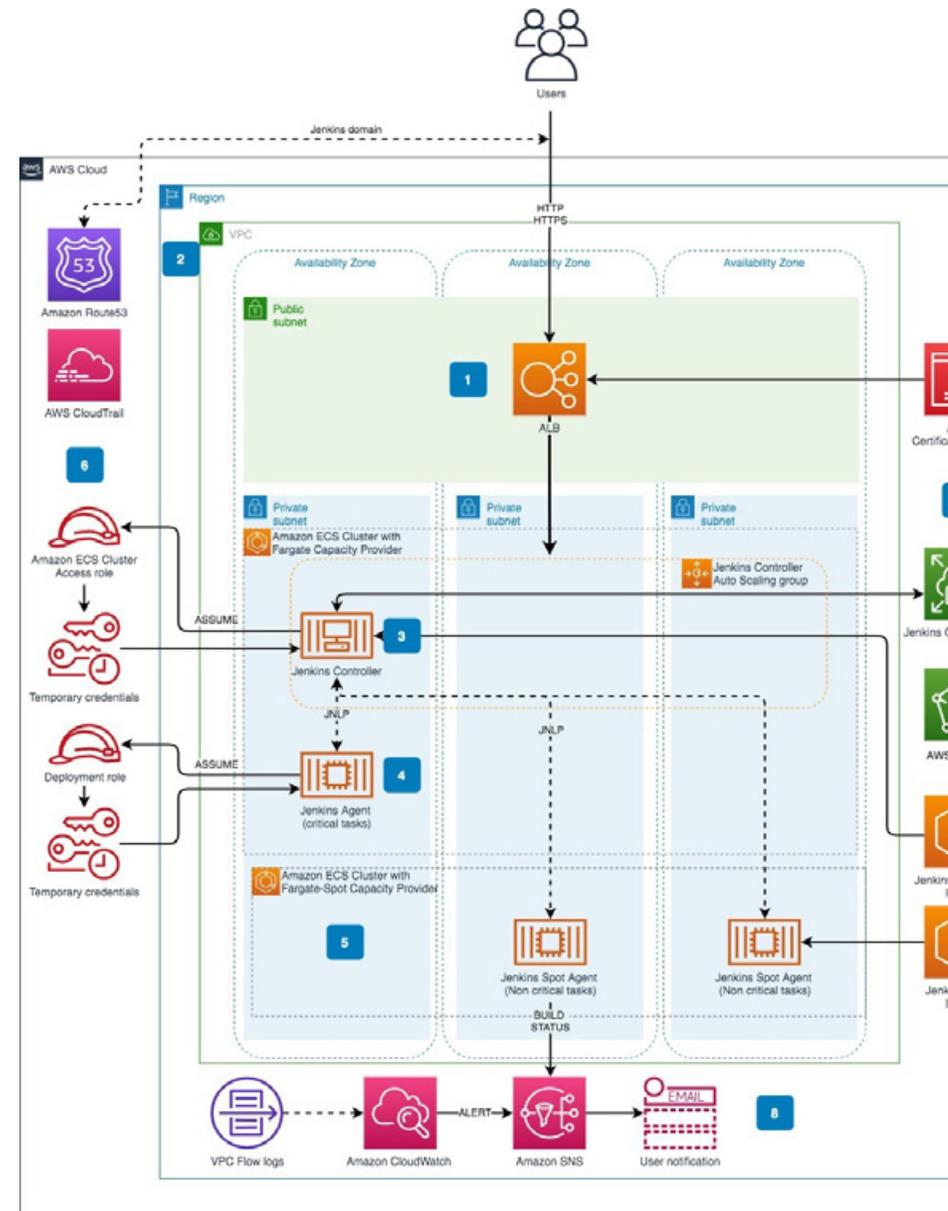
IPaaS (Integration Platform as a Service) No-Code and Low-Code Tools

For many HubSpotters exploring integration, IPaaS tools are a must-have tool in the tool kit. They allows users to explore creative integration solutions without needing to functionally deploy these solutions via code.

Essentially, IPaaS systems are custom coded workflows or server-based workflows without the coding part.

Codeless coding allows you to dream up the most complex and gnarly custom integration that considers every variable that your mind can think of...and then execute on them without having to write a single line of code. The things you build in a codeless system like Zapier could require writing thousands of lines of code if you didn't have their interface to do that work for you.

Tools like Zapier, Workato, and Tray.io allow you to perform this automation and integration magic using APIs just like the other two solutions above.

Every API has a set of values or properties that can be shared and functionality that can be triggered. An IPaaS allows you to perform each of those functions and control your dataflow by choosing an option from a picklist and clicking your way through the configuration process.

- They tell you all of the triggers and actions that you can perform based on an application's API.

- They tell you all of the values that can be updated or input based on an application's API.

- They allow you to manipulate data with point and click tools.

- Every value or variable that is pushed to the platform in one step is available in every step that follows.

All of this is standard across IPaaS systems. But within the IPaaS category, there are different types of platforms, each with pros and cons of their own.

Zapier, for example, is very cost-effective if you are not running 10s of thousands of tasks a month. The number of automations you run, running frequency, and complexity of the automation impact how many "tasks" are used and that drives your billing.

Cost is most certainly a factor when someone is choosing their automation engine and sometimes a tool like Zapier just makes sense.

But Zapier only allows you to work with apps

that have been integrated by the application creator/owner, and this is where it falls short of the other options listed. Thousands of popular applications have an API but have not connected it to a tool like Zapier.

This is where other IPaaS platforms like Workato and Tray.io come into play. They allow you to do what HubSpot's Operation's Hub allows you to do and what server-based workflows allow you to do. You can connect the API environments of tools that have not yet built their own integration with the platform. Workato and Tray.io have thousands of pre-built integrations like Zapier does, but they also allow you to connect tools that have not yet built their own connections.

These platforms are more expensive than Zapier and oftentimes more expensive than server-based solutions or the Operations Hub Pro subscription.

That being said, cost is not always the most important factor.

IPaaS platforms are tool agnostic, so regardless of which CRM you are using or what the contact enrichment tool of the moment is, your automation engine can remain the same. This is also true of the Operations Hub, of course, but it doesn't have the point and click options that IPaaS systems offer.

Considerations Breakdown for IPaaS
No Code, Low Code Tools

SAAS APPS

ON-PREMISES APPS AND DATA

IPAAS

B2B

DEVICES

ED APPS
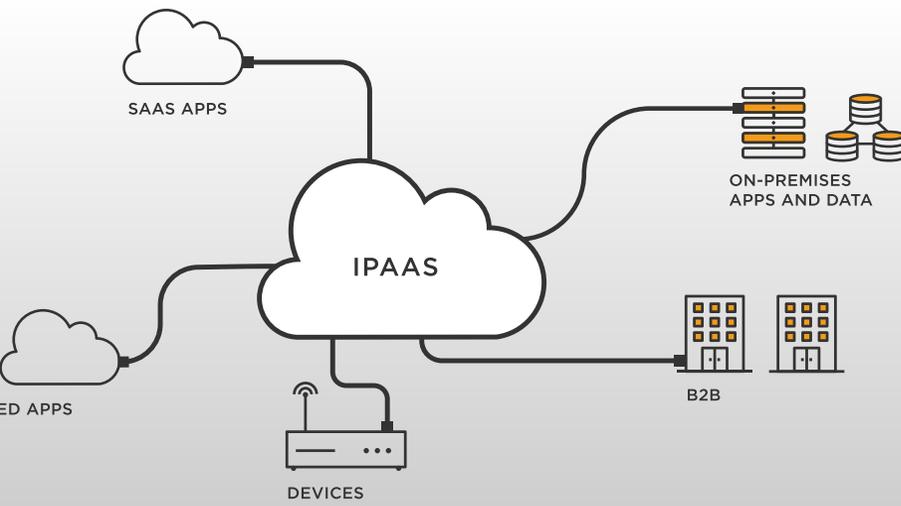
- Each IPaaS tool has its own billing model and understanding that billing model will inform whether or not the IPaaS meets your API needs at a reasonable price. Most of these platforms will not call the units you are billed for "API calls." Zapier calls them tasks. Tray.io and Workato pricing is based on the number of workflows you build as well as the number of API calls made.

- Zapier starts at $29/mo for multi-step Zaps. Tray.io and Workato are usually $7k/year or more. How many workflow automations you run and how many activities happen within them, and how frequently they run will be a big driver in determining if an IPaaS is the most cost effective solution for your business.

- These platforms are fairly sustainable. The workflows you build will be very visual and relatively easy for those without coding skills to follow and understand. That said, documentation is very important. All IPaaS systems are all prone to occasional bugs, but their systems provide useful error logs and notifications to resolve errors quickly.

- If you utilize Zapier, you can build complex integrations with no code. You need strong conditional logic and technical knowledge but no coding experience. Platforms like Tray.io and Workato can be no code if the tools you wish to integrate have already built their API into those systems. If not, then your team will need to be able to work in a blended environment where some functionality requires code and some does not.

- If you are already using one of these tools for custom integrations then it may be the best option for you, depending on other considerations.

- Zapier does not allow you to integrate tools that have not been integrated by the tool owner/creator. This is a definite limitation. Tray.io and Workato do allow other tools to be integrated.

- All of these tools allow you to build very complex integrations – don't let the no code, low code nature fool you. These tools pack a punch and are powerful for those who are very creative problem solvers who don't code.

When it comes to building a custom integration with HubSpot, there are many options available to you and multiple factors to consider so that you make the right decision based on all of the factors that matter to your organization. If you aren't sure where to go from here, **shoot us an email - we are happy to help!**

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